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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) Title: CONFORMATION SPECIFIC ANTIBODIES

(57) Abstract: The disclosure provides, *inter alia*, binding proteins (e.g., antibodies) that bind to an integrin in an activated conformation, e.g., activated LFA-1 ("aLFA-1"), e.g., relative to a non-activated conformation of LFA-1. In one embodiment, the binding proteins inhibit at least one function of an aLFA-1, e.g., inhibit a binding interaction between aLFA-1 and a cognate ligand of aLFA-1, e.g., an ICAM protein. The binding proteins can be used to treat or prevent an inflammatory disorder or other disorder.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/05361

A. CLASSIFICATION OF SUBJECT MATTER

IPC: A61K 39/395(2006.01);C07K 16/46(2006.01),16/28(2006.01),16/00(2006.01)

USPC: 424/144.1;530/387.3,388.22,391.7

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
STN, WEST, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0123614 A1 (SPRINGER et al) 05 September 2002 (05.09.2002), claims.	10-11 and 22
A	US 7,160,541 B2 (SPRINGER et al) 09 January 2007 (09.01.2007), entire document.	1-33
A	JUN et al. Dimerization and the effectiveness of ICAM-1 in mediating LFA-1-dependent adhesion. Proc. Natl. Acad. Sci. U. S. A. 5 June 2001, Vol. 98, No. 12, pages 6830-6835.	1-33
A	SHIMAOKA et al. AL-57, a ligand-mimetic antibody to integrin LFA-1, reveals chemokine-induced affinity up-regulation in lymphocytes. Proc. Natl. Acad. Sci. U. S. A. 19 September 2006, Vol. 103, No. 38, pages 13991-13996.	1-33
A	LU et al. Locking in alternate conformations of the integrin alphaLbeta2 I domain with disulfide bonds reveals functional relationships among integrin domains. Proc. Natl. Acad. Sci. U. S. A. 27 February 2001, Vol. 98, No. 5, pages 2393-2398.	1-33

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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INTERNATIONAL SEARCH REPORT

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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	LU et al. An isolated, surface-expressed I domain of the integrin alphaLbeta2 is sufficient for strong adhesive function when locked in the open conformation with a disulfide bond. Proc. Natl. Acad. Sci. U. S. A. 27 February 2001, Vol. 98, No. 5, pages 2387-2392.	1-33
A	SALAS et al. Transition from rolling to firm adhesion can be mimicked by extension of integrin alphaLbeta2 in an intermediate affinity state. J Biol Chem. 21 April 2006, Vol. 281, No. 16, pages 10876-10882.	1-33
A	SHIMAOKA et al. Small molecule integrin antagonists that bind to the beta2 subunit I-like domain and activate signals in one direction and block them in the other. Immunity. September 2003, Vol. 19, No. 3, pages 391-402.	1-33